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1986 No. 3

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Beginning with the next issue, Joan C. Courtless will be editor of the Family Economics Review. Marilyn Doss Ruffin extends her appreciation to the many people who have assisted her during the time she served as editor.

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Issued July 1986

Housing Alternatives for the Elderly¹

By Joyce Matthews Pitts
Home Economist

The elderly are heterogeneous in their ages, economic status, and physical conditions. Housing and living arrangements among the elderly have become more diverse than those for any other age group. Just 20 years ago, almost one-half of all parents age 65 and over lived with their children. Today, although contacts with children remain frequent, few elderly actually reside with them. Only 13 percent of all elderly live with a child or other relative (not including their spouse), and only 2 percent live with a nonrelative. Most elderly people are independent. Almost 85 percent are either the head or married to the head of the household. Elderly men are more likely to live with a spouse, but elderly women frequently live alone (table 1) (16).

HOUSING NEEDS

The elderly can be divided into two groups: (1) Those who are relatively healthy, active, able to live independently, and able to perform most physical functions; and (2) those who have chronic conditions² that limit their mobility. The likelihood of developing a chronic illness increases dramatically with age. One-half of all persons age 85 and over report that they have one or more chronic conditions that limit their capacity to perform certain physical activities (12).

What happens to the living arrangements of the independent elderly as time passes and they become the aged (those age 75 and over) and the very old (those 85 years old and over)? What kind of housing alternatives are available to each of these groups? There is apparently a need for a wide range of housing alternatives--from housing that allows

for complete independence to housing that integrates health and social services. Housing alternatives for the elderly should be appropriate for their small-sized households, physical conditions, and, in many cases, limited resources. Special housing planned and designed for the elderly, along with necessary support services, can prevent premature institutionalization. In 1977 the Congressional Budget Office (7) estimated that between 10 and 40 percent of persons in skilled and intermediate care nursing facilities did not need to be there. Some type of alternative housing is needed for these and other elderly who do not require constant medical care but are not able to live independently.

TYPICAL HOUSING ARRANGEMENTS

Seven out of ten elderly persons own the house they occupy. Even though 84 percent have no mortgage, the elderly spend a greater proportion of their income on housing than younger people. According to the 1980 Census of Housing, elderly married-couple families with mortgage-free homes spend over 12 percent of their income on housing, compared with about 10 percent for married-couple families with household heads 45 to 64 years of age; those who hold a mortgage spend about 21 percent of their income on housing compared with about 15 percent for the younger age group. The

Table 1. *Living arrangements of the elderly--1983*

Living arrangement	Total ¹ Male Female		
	(percent)		
Alone	30.5	15.4	40.9
With spouse	54.2	76.7	38.7
With relative	13.1	5.7	18.2
With nonrelative	2.1	2.1	2.2

¹Does not total to 100 because of rounding.

Source: U.S. Department of Commerce, Bureau of the Census, 1984, Current Population Reports, Series P-20, No. 388, [as reported in the Statistical Abstract of the United States 1985, 105th edition, p. 44].

¹The term "elderly" refers to persons age 65 and over.

²Chronic conditions include such illnesses as arthritis, hypertension, visual and hearing impairments, heart disease, and diabetes.

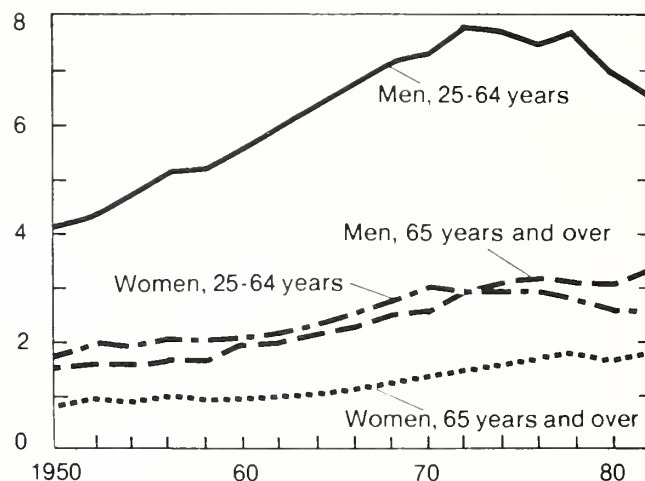
elderly must spend a larger portion of their income on housing because they receive less income than younger individuals. Elderly women also pay a higher percentage of their income for housing than elderly men (see figure and table 2).

High costs related to homeownership (such as utilities, property taxes, and maintenance) may cause some elderly homeowners to consider moving to rental units. About one-third of elderly householders rent. Elderly renters generally have lower incomes than elderly homeowners. These renters spend a higher proportion of their income on housing than younger renters--about 25 percent for elderly married-couple families compared with about 18 percent for similar families 45 to 64 years of age.

Commercial hotels that cater to elderly residents often are low cost and located in central cities. In 1976, about 80,000 elderly persons lived in commercial hotels. Most residents of these facilities were never-married men. A few elderly also live in rooming and boarding houses. A rooming house rents a room but usually has no provision for meal preparation; a boarding house usually provides, in addition to a room, at least one meal per day. A disproportionately large number of never-married elderly men were found to live also in rooming houses (3).

Median Income by Age and Sex

Thousands



Median income in 1967 dollars.

Source: U.S. Bureau of the Census, as appearing in the 1985 Agricultural Chartbook, U.S. Department of Agriculture.

According to the 1980 Census of Housing (15), over 700,000 elderly people live in mobile homes. Many are attracted to this type of housing because units are relatively inexpensive, can be purchased fully furnished, and are compact, yet efficient. Some elderly people place their mobile homes near their family. Others live in mobile-home parks where they are near other units. This

Table 2. Housing costs as a percentage of household income, by age and sex of Householder

Householder	Median percentage by age				
	65 to 69	70 to 74	75 to 79	80 to 84	85 and over
Male:					
Rent	21.7	23.5	24.6	25.5	25.8
Own, with mortgage	20.5	24.0	27.6	30.5	33.4
Own, without mortgage	10.9	12.5	13.5	14.6	15.6
Female:					
Rent	29.8	30.8	31.4	31.7	31.8
Own, with mortgage	33.1	36.5	37.4	38.4	39.3
Own, without mortgage	17.5	19.1	20.5	21.4	22.3

Source: U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population and Housing, 1986, [As reported in U.S. Senate Special Committee on Aging publication, Aging America--Trends and Projections; 1985-86 edition.]

encourages frequent social contact with neighbors but limits privacy. Mobile-home parks may have recreational facilities. Parks, however, may not be conveniently located since many local ordinances allow such communities only in outlying areas.

ALTERNATIVE HOUSING ARRANGEMENTS

Housing in the Community

About 95 percent of the elderly live within the community; most prefer to remain there. The mortality and morbidity rate among the elderly rises rapidly within 9 months of being forced to move from their residence of many years (9). Seventy percent of persons older than 65 will die at the same address they had when they turned 65 (11).

Since job relocation is a major reason for moving, and most elderly do not work, they are not as likely to change residences as younger persons. Between 1975 and 1979, only about 16 percent of the elderly moved from one housing unit to another. Of the 3.9 million who did move, 57 percent remained within the same county; of those who moved out of the county, 22 percent remained within the same state. Out-of-state migration for the elderly generally follows the same pattern as that for the population as a whole, with some concentration toward the sunbelt (5).

The elderly are often able to remain in the community because they are married and have spousal support (over 50 percent live in husband-wife households) or they live

near family. Data do not support the supposition that the elderly are abandoned by their families. A study by the U.S. General Accounting Office (5) revealed that one-half of all home-help services received by the elderly were provided by family members and friends. Even those elderly with serious medical conditions can live in the community with suitable live-in support from family, friends, or hired assistance. In 1976 the Congressional Budget Office estimated that between 3 and 6.7 million people, many of whom were elderly, received long-term care services in their home from family members.

Several housing alternatives allow the elderly to remain close to family, friends, tenants, or care givers without giving up their independent lifestyle. Having someone nearby provides the elderly with a sense of security. In areas where traditional housing is expensive and in short supply, these alternatives could provide additional housing opportunities for families of any age.

Accessory apartment. An accessory apartment, sometimes referred to as a "mother-in-law apartment," is a separate, independent living unit built into an existing house typically at a cost of \$5,000 to \$25,000. There is a separate kitchen, bath, bedroom, living room, and entrance. Accessory apartments allow the homeowner to rent one part of the house while continuing to live in the other. The possibility of establishing accessory apartments in a particular neighborhood depends on local zoning regulations;

Many elderly homeowners are over-housed, living in large, older homes, on incomes at or below poverty levels. Home equity conversion is a way for these elderly to use the equity that is in their homes for living expenses or house repairs without having to sell. With an equity conversion plan, the elderly homeowner takes out a loan with a bank or other lender for a percentage of the home's equity. This money is used to buy an annuity or other investment that will provide the homeowner with regular income. The lender is repaid when the homeowner dies or the house is sold. There are several variations to this scenario. For additional information on home equity conversions, see "Developments in Home Equity Conversion," by Frankie N. Schwenk, Journal of Home Economics, Fall 1984; Home Equity Conversions by the U.S. House of Representatives Select Committee on Aging, Comm. Pub. No. 98-426; and "Home Equity Dissaving: A New Option for the Elderly," by John Gruidl and Marvin Johnson, in Economic Issues, 1982, College of Agricultural and Life Sciences, University of Wisconsin-Madison.

they are illegal in most neighborhoods with single-family homes. Some localities have created special-use zoning permits allowing the elderly to take advantage of this housing alternative. Even so, about 2.5 million illegal accessory apartments are believed to exist in the United States (11).

ECHO housing. Elder Cottage Housing Opportunity (ECHO) is the American version of Australian housing for the elderly known as granny flats. ECHO houses are designed specifically for the elderly and disabled. These small, self-contained, portable living units can be placed in the side or back yard of a single-family, free-standing house and can be aesthetically compatible to the main house and the neighborhood. The unit can be installed on a relative's property or next to a house owned by the elderly individual. The elderly person's house can then be rented to another family. Installation or removal of the ECHO unit can be accomplished in just 2 days. When no longer needed the unit can be transported to another location. One-bedroom units can be completely installed for less than \$20,000. Although there is ECHO housing activity in Pennsylvania and California, this type of building is not permitted wherever local zoning laws prohibit prefabricated housing. Where allowed, they only can be erected with a special-use permit, which usually has an expiration date.

House sharing involves two or more usually unrelated persons living in the same house or apartment and sharing the living room, dining area, and kitchen. Bedroom and bathroom facilities may be shared or separate. Approximately 500,000 elderly persons live in some type of shared housing (11). House sharing may be initiated by the elderly landlord and renter themselves (sometimes referred to as naturally occurring shared households) or may be arranged by agencies.

The 1980 Housing Choices of Americans Survey included 1,300 households with at least one person age 55 or over (10). This survey found that 2.5 percent of older households were naturally occurring shared households. Sixty-six percent consisted of three or more persons and 75 percent were located in metropolitan areas. Thirty percent of the homes in which they lived were valued at \$100,000 or more; 50 percent

were mortgage free; 20 percent had mortgages; and 30 percent were rented. Although 40 percent of the elderly residents had no children, two-thirds of the house sharing arrangements were intergenerational. These shared households were more likely to be headed by a married couple than by a widow. This study suggests that shared housing initiated by older persons themselves is not as prevalent among the very old, frail, or economically disadvantaged as might be expected.

In some areas, local government agencies or other organizations initiate shared-housing programs in one of two ways:

(1) A match-up program in which the organization interviews interested homeowners and prospective tenants, inspects housing, checks references, and facilitates a match; or

(2) A resident program in which the organization leases or buys a house and actually administers the residence.

Only in agency-sponsored home sharing projects (often called group homes) are the elderly residents likely to be poor or have mobility limitations. A study of a match-up program in Kensington, MD, found that most elderly people preferred renting to someone who worked rather than to someone who stayed home all day, but the tenant's age was unimportant (4). In 1983 there were about 150 nonprofit match-up programs and 150 nonprofit group residence programs in the United States (11).

House sharing and accessory apartments can be advantageous for both homeowner and tenant. Each can benefit financially. In Philadelphia, for example, a match-up shared-housing program provided homeowners with an average of \$1,600 per year in additional income and saved tenants an average of \$1,500 in rent payments (11). Residents also can share common expenses and house-keeping. There is sometimes an exchange of services, such as cooking, gardening, home repairs, or personal care³ of the homeowner,

³ Personal care includes such services as help with dressing, grooming, bathing, feeding, and moving around.

for a reduction of rent. Each of these housing alternatives can promote companionship and security for the elderly. Compatibility between tenant and homeowner is vital for these housing alternatives to be successful, however.

Supportive Housing

Supportive-housing arrangements for the elderly provide a variety of services ranging from simple housekeeping assistance to full-time medical care. There are several kinds of supportive-housing programs: Board and care homes, congregate housing, and continuing-care communities. Retirement communities may or may not provide some support services.⁴ Characteristics of supportive housing include assistance with household chores, access to medical facilities, and shared social activities (1).

Board and care homes are usually rental rooms or efficiencies where residents may come and go as they like. Sometimes called sheltered housing or residential care facilities, these homes typically offer regular housekeeping and laundry services, as well as room and meals. For an additional fee some facilities also offer personal care services and recreational activities.

Congregate housing is "a residential environment which includes services...[that] are required to assist impaired, but not ill, elderly tenants to maintain or return to a semi-independent lifestyle and avoid institutionalization as they grow older."⁵ Congregate housing has private or shared living quarters that include a kitchen where light meals can be prepared. Residents routinely share meals and social events. This type of housing differs from board and care homes because a professionally trained staff of nurses, counselors, nutritionists, and other personnel is present to monitor the health and well-being of the residents.

⁴ Another type of supportive-care facility, nursing homes, will not be discussed. Only about 5 percent of the elderly population is institutionalized.

⁵ U.S. Senate Special Committee on Aging, 94th Cong., 1st sess., 1975, Congregate Housing for Older Adults, Senate Report 94-478.

Many congregate housing programs are sponsored by churches, government agencies, and other nonprofit organizations. The Department of Housing and Urban Development has several programs that provide assistance for congregate housing, including Section 202 that provides financing for construction of housing for the elderly and Section 231 that insures mortgages on housing for the elderly (19). In 1977 the Congressional Budget Office estimated there were as many as 635,000 units of congregate housing in existence. However, 1.3 to 1.7 million persons could use this type of housing if more units were available.

A study of congregate housing projects revealed that most residents are over age 75 (72 percent), move into a home at a relatively young age (62 to 65 years), and are likely to be single or widowed women (80 percent). Their income is typically higher than the national average for persons of their age (8).

Rates charged by congregate housing facilities cover a package of services including meals, laundry, housekeeping assistance, and transportation to shopping and social events. For an additional fee, medical care and personal care services often are available. Although congregate housing is thought to be for impaired elderly, many fully independent people choose to live there. Some congregate housing programs are somewhat institutionalized, however, and offer few options for independent living.

Continuing-care communities provide independent living quarters in efficiencies or one- and two-bedroom units (in highrise or garden apartments), or one- and two-bedroom cottages. A continuing-care community is affiliated with a nursing home that is usually located on the grounds of the community. The primary goal of a continuing-care community is to reduce the health and emotional difficulties of aging by providing a wide range of services and activities at one location.

New residents usually must meet certain entrance requirements. For example, they must be healthy, ambulatory, and able to

satisfy the facility's financial requirements. Residents live an active, independent life for as long as they can, get routine medical care as needed, and receive long-term nursing care should it become necessary. Continuing-care communities allow couples to stay together in the same community, even if one's health deteriorates to the point where he or she must be placed in the 24-hour nursing care facility.

Services offered by continuing-care communities vary and can include: Meals (in private quarters or dining halls); health care (nursing and pharmaceutical services, physical therapy, and continuous medical care); personal conveniences (beauty and barber shops, and banks); organized social activities (dances, games, and craft shops); recreational facilities (swimming pools and golf courses); educational programs (organized classes and libraries); transportation; gardening space; and laundry, religious, and room services. Because of the many services and activities available, living in these communities can be very costly. Entrance fees can range from \$10,000 to \$150,000, and monthly charges, from \$250 to \$1,700. Many elderly, however, feel this a small price to pay for the assurance of housing, medical care, and recreational facilities for the rest of their lives, regardless of their health.

Most continuing-care communities are sponsored by nonprofit housing corporations. Some facilities are so popular that names are placed on a waiting list years before space becomes available, whereas other facilities remain only partially filled. The American Association of Homes for the Aging estimates that there are about 600 such communities in the United States (6).

Retirement communities are age-segregated developments built specifically for the elderly. Residents usually have to be at least 50 years old. Housing may be somewhat less expensive than in the community at large; nevertheless, those who live in retirement communities typically are middle-income elderly. Retirement communities are often built in rural areas, near towns where residents can use public transportation and other services. Housing can be detached houses, duplexes, apartments, or mobile homes. Living units may be for sale

or for rent. Sometimes certain services are included in the cost, such as use of medical or recreational facilities. In 1985 there were about 2,400 large-scale retirement communities in the United States (2, 20).

OUTLOOK AND IMPLICATIONS

The number of persons age 65 and over will increase by about 12 percent between the years 2000 and 2010, and by 31 percent between 2010 and 2020 (13). Some experts estimate that 235,000 new housing units for the elderly will be required by the year 2000 (18). Others raise doubts as to whether the private sector can meet this need.

The elderly population will be better educated and more affluent and active than previously. Housing choices will need to adapt to the desires of a changing elderly population. As more elderly continue to work after retirement, elderly housing will likely be built away from the sunbelt areas and closer to employment opportunities. Also, more units will be built near recreational and educational facilities so the elderly can continue activities they enjoyed when they were young. Mobile homes, ECHO housing, and other types of manufactured housing are expected to be used increasingly to provide housing for the elderly at low costs (17). Resident-owned retirement communities will likely remain popular, but future communities will have fewer housing units and fewer costly recreational amenities than current communities (20). House sharing is expected to become a more accepted option, also.

Gerontologists, home economists, counselors, educators, and other professionals need to encourage families and individuals to consider housing options early in their preretirement plans. These professionals should be familiar with the various housing options available to the elderly and be able to provide families and individuals with information on--

(1) Which factors to consider in making a retirement housing decision (such as income; ties with family, friends, and neighborhoods; health; costs and availability of options; and personal preferences).

(2) Which housing characteristics can accommodate several generations.

(3) How to reconcile future housing expenses with expected retirement income.

Builders should be encouraged to incorporate features that make housing more adaptable to the elderly. For example, extra-wide doorways and lowered light switches would accommodate people in wheelchairs; door levers instead of doorknobs would allow those with arthritis to enter and exit more easily; and nonslip floor surfaces and bars installed in showers could prevent falls. These changes would not make the housing unit any less attractive to young families but could benefit older families considerably.

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Nutrient Content of the U.S. Food Supply

Major changes in nutrient levels of the Nation's food supply are reported in an article "Nutrient Content of the U.S. Food Supply, 1984" by Ruth Marston and Nancy Raper published in the National Food Review (NFR-32). The article also includes a detailed review of trends in the levels and sources of calcium in the food supply since 1909-13.

The nutrient content of the food supply is based on per capita amounts of foods available for consumption, and food composition data. Food losses occurring after per capita food consumption is measured, such as in further processing, marketing, and home use, are not considered. Therefore, nutrient levels provided by the food supply may be higher than quantities actually ingested.

Between 1983 and 1984, nutrient levels of the food supply increased between 2 and 5 percent for iron, vitamin A, calcium, and vitamin B₁₂. Levels of food energy and 11 nutrients--protein, fat, carbohydrate, phosphorus, magnesium, zinc, thiamin, riboflavin, niacin, vitamin B₆, and cholesterol--increased 1 percent or less. The only decline (3 percent) was for ascorbic acid.

Changes between 1967 and 1984 were greater than year-to-year changes. Levels were from 1 to 17 percent higher for food energy, protein, fat, carbohydrate, calcium, phosphorus, magnesium, iron, zinc, vitamin A, riboflavin, thiamin, niacin, vitamin B₆, and ascorbic acid. Levels for vitamin B₁₂ and cholesterol declined 4 and 8 percent.

The calcium level of the food supply increased from 503 to 700 mg per capita per day between 1909-13 and 1984. Dairy products were the leading source of calcium, providing three-fourths of the total in 1984 compared with two-thirds in 1909-13. In descending order, whole milk, cheese, and skim and lowfat milks were the main sources of calcium. The share of calcium from whole milk declined, while the share from cheese and skim and lowfat milks rose. Vegetables--including potatoes and sweetpotatoes, and dry beans, peas, nuts, and soy products--together provided the largest share of calcium from nondairy foods.

Share of Income Spent for Food

In 1984, Americans spent 15.1 percent of after-tax income on food, down from 15.6 percent in 1983. Moderate inflation, coupled with a nearly 10-percent jump in disposable income, reduced the share of income spent on food by a larger amount than in any year since 1971. This decline in the proportion of income spent on food continues a long-term trend (see table). All of the decline has occurred in spending for food at home; expenditures on food away from home have remained relatively stable.

Source: Kurland, Julie, and Denis Dunham, 1985, Smaller share of income goes for food, National Food Review, NFR 31, fall issue, pp. 26-27.

Proportion of income spent for food

Year	At home ¹	Away from home ²	Total
1930	20.2	4.1	24.4
1935	19.5	3.8	23.3
1940	17.9	4.1	22.0
1945	15.6	6.6	22.2
1950	17.7	4.5	22.3
1955	16.9	4.2	21.1
1960	16.0	4.0	20.0
1965	14.0	4.0	18.0
1970	13.2	4.0	17.2
1975	12.7	4.2	16.9
1976	12.5	4.3	16.8
1977	12.2	4.3	16.5
1978	12.0	4.3	16.3
1979	12.1	4.4	16.5
1980	12.1	4.3	16.5
1981	11.8	4.2	16.0
1982	11.6	4.2	15.8
1983	11.2	4.4	15.6
1984	10.8	4.3	15.1

¹Includes food purchases for off-premise consumption and food consumed on farms where produced.

²Includes purchased meals and beverages, excluding alcohol, and food furnished to the military and employees of hospitals.

Source: Kurland, Julie, and Denis Dunham, 1985, Smaller share of income goes for food, National Food Review, NFR 31, fall issue, pp. 26-27.

Family Expenditures for Food Away From Home and Prepared Foods

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Since more women have entered the labor force in the past 10 years, the distribution of a household's production time has changed, particularly in the area of food preparation. Households with working wives may choose to substitute meals outside the home in lieu of preparing meals at home, which are more labor intensive. With additional money income earned by employed married women, household time and leisure are bought by eating meals outside the home.

Several studies have examined relationships between the value of the homemaker's time, her time allocation, and her family's expenditure on meals away from home. Redman (5) used data from the 1972-73 Consumer Expenditure Study, conducted by the Bureau of Labor Statistics (BLS), U.S. Department of Labor, to test the relationship between certain characteristics of the homemaker and away-from-home food consumption. Prochaska-Schrimper (4) incorporated the value of the homemaker's time in their model explaining the purchase of meals away from home, using data from the 1965-66 Nationwide Household Food Consumption Survey, conducted by the Agricultural Research Service, U.S. Department of Agriculture. Kinsey (2) used 1978 data from the Panel Study of Income Dynamics (collected by the Institute of Social Research, University of Michigan) to test the effect of various sources of household income on the marginal propensity to consume food away from home, for various family

types. Differences in methodology, however, make it difficult to compare Kinsey's findings with those from the two earlier studies.

Since the collection of the data used by Prochaska-Schrimper and Redman, several changes have occurred that affect family expenditures for food consumed away from home, and, therefore, their conclusions no longer may be valid. Between 1965 and 1980 labor force participation rates among married females, with spouse present, increased by 40 percent; among young wives, ages 25 to 34, labor force participation rates increased by more than 80 percent (8). In addition, both surveys were conducted before the large increases in energy prices.

During the 10-year period between 1972 and 1981, food expenditures increased by 50 percent as energy expenditures increased by 150 percent. A greater proportion of a family's total expenditures was needed for gasoline and oil, and electricity and natural gas. Although food's share of total expenditures has decreased over the years, the proportion of food expenditures spent on food consumed away from home has steadily increased, comprising 17 percent of food expenditures in 1961, 28 percent in 1972, and 32 percent in 1981 (9).

The purpose of this research was to identify changing food expenditure relationships between 1972-73 and 1980, to determine the marginal propensity to consume food away from home and prepared foods, and to examine whether the employment of the wife continues to affect the allocation of time in household production, as evidenced by increased spending for meals away from home.

Procedure

To obtain a current picture of the determinants of expenditures for food consumed away from home and prepared foods, data from the BLS 1980 Diary Consumer Expenditure Survey were analyzed. Survey respondents had kept a detailed record (weekly diaries) of their expenditures for food and other frequently purchased items over a 2-week period. The diary period varied from respondent to respondent, but all were within the 1980 calendar year.

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To control for family type, only consumer units headed by a married couple were included in the sample. Regression equations were estimated using variables addressed in the Redman study, plus additional variables designed to observe the interaction effect of households with employed married women and family income. Regression coefficients were compared with those estimated using the 1972-73 CES data, after adjusting for price changes that occurred between 1972-73 and 1980 (table 1). Results are presented for two categories of food expenditures--food consumed away from home and prepared foods.

Food Away From Home

The relationship between family income and expenditures on food consumed away from home, though still positive, weakened between 1972-73 and 1980. Wife's employment was positively related to food expenditures away from home in 1980, compared to a negative impact in 1972-73; neither estimate, however, was significant. The interaction of income and wife's employment remained positive for both time periods but was not significant with the 1980 data. Because the intercorrelation between the interaction and wife's employment was high ($r = .75$), multicollinearity could contribute to the insignificance. Joint F-tests were conducted to

Table 1. *Expenditures for food away from home, 1980 and 1972-73*

Variable	1980		1972-73	
	Estimated coefficient	Standard error	Estimated coefficient (adjusted for price changes between 1972-73 and 1980)	Standard error
Intercept.....	15.091*	4.781	18.844*	2.360
Income .....	.468*	.077	.744*	.026
Employment of wife	3.784	2.683	-.842	1.378
Interaction .....	.076	.096	.153*	.042
Wife's education	5.595*	1.560	3.423*	1.107
Wife's age	-.139*	.059	-.192*	.029
Family size	2.596*	.931	.473*	.565
Family composition:				
Preschool	-7.837*	1.513	-3.699*	.804
Elementary	-3.217*	1.364	-1.194	.716
High school	-.423	1.447	-.377	.772
Region:				
Northeast .....	.017	2.100	1.211	1.113
North Central	-2.127	1.997	-3.867*	1.040
South .....	.235	2.053	-2.886*	1.044
Black race	-11.143*	2.539	-8.718*	1.378
Residence:				
Metropolitan	5.304*	2.090	3.967*	1.060
Urban.....	-4.109	2.890	-4.386*	1.379
Rural	-6.260*	2.536	-5.626	1.260
R ²	.157		.159	
Sample size	2,222		12,819	

*Significant at .05 level.

test for the significance of the combined effect of wife's education, wife's employment, family income, and the interaction variables on the dependent variable. Results of this analysis indicated each of these variables was significant (at .001 level) in explaining food away from home.² Additional regression models, omitting either employment of wife or interaction, were tested.

² Joint F-tests also indicated that family composition, urbanization, location (region and urbanization), and household characteristics (black race and family size) were significant, at .001 level, in explaining away-from-home food expenditures.

In these models, the remaining variable became significant. The positive coefficient for the employment variable, combined with significant results in the regression model that omitted the interaction variable, indicated a positive impact of female employment on expenditures for food away from home.

The effect of a wife's college education on expenditures for food away was greater in 1980 than in 1972-73. Households in which the wife had some college education spent significantly more on food away from home than other households.

VARIABLE DESCRIPTIONS

Income	Family income before taxes.
Employment of wife	Dummy variable taking on value of 1 if wife was employed either full or part time.
Interaction	Employment of wife X income.
Wife's education	Dummy variable taking on value of 1 if wife had more than high school education.
Wife's age	Age of wife in the family.
Family size	Number of persons in the family.
Family composition:	
Preschool	Number of children in the family under 6 years old.
Elementary	Number of children in the family 6 to 12 years old.
High school	Number of children in the family 13 to 17 years old.
Region:	
Northeast, North Central, South	Regional dummy variables.
Black race	Dummy variable taking on value of 1 if reference person was black.
Residence:	
Metropolitan	Dummy variable defined as a standard metropolitan statistical area (SMSA) ¹ with a population of 400,000 or more.
Urban	Dummy variable defined as an urban area outside an SMSA.
Rural	Dummy variable defined as rural by the Bureau of Labor Statistics and the Bureau of the Census.
(The remaining area is defined as having a population of less than 400,000 in an SMSA.)	
Food away	Total weekly expenditures for food consumed away from home excluding snacks.
Prepared food	Total weekly expenditures for prepared foods. Prepared foods included items such as prepared flour and cake mixes, bakery products, canned and packaged meats, canned and frozen vegetables and fruits, and miscellaneous frozen meals.

¹In 1983 the Bureau of the Census replaced the classification, standard metropolitan statistical area (SMSA), used to describe all metropolitan areas, with 2 terms: Metropolitan statistical area (MSA), a free-standing metropolitan area surrounded by nonmetropolitan counties; and primary metropolitan statistical area (PSMA), a metropolitan area that is closely related to another.

Wife's age was negatively related to expenditures for food away from home. A comparison of 1980 and 1972-73 regression coefficients showed a decline in magnitude, however. Smaller incomes and the limited mobility of older households may help explain their lower expenditures for food away from home.

Black households spent considerably less than others for food away from home in 1980 and 1972-73. This difference increased between 1972-73 and 1980.

A comparison of results indicated the impact of children had also increased. The 1972-73 data show that the presence of children, particularly for families with pre-school and elementary school children, had a negative effect on food away from home, which became greater in 1980. Behavior and physical characteristics of preschoolers may result in fewer meals purchased outside the home. As children grow older, households with employed married women may experience an increase in real income, allowing for more eating occasions outside the home. Additionally, high school children, acting independently, may purchase more food away from home than younger children. Overall family size, however, had a positive influence on food expenditures away from home that increased between 1972-73 and 1980.

Although family expenditures for food consumed away from home in the North Central and Southern regions were less than in other regions in 1972-73, by 1980 there were no significant differences among regions. Households in metropolitan areas spent the most for food away in both 1980 and 1972-73, whereas those in the rural areas spent the least in 1980. Differences between rural and metropolitan areas were larger in 1980 than 1972-73. Restaurant availability may contribute to these results.

Prepared Foods

No change was observed in the relationship between family income and expenditures for prepared foods in the years between 1972-73 and 1980 (table 2). The employment of the wife had a large positive impact in 1980 compared to 1972-73. The interaction of family income and wife's employment was negative, however. For every dollar increase in real income in 1980, families with

employed wives spent an additional \$0.05 for prepared foods, whereas other families expended \$0.22. Meals that include prepared foods still involve setting and clearing the table, washing dishes, and kitchen cleanup. Because time becomes relatively more valuable than money as income increases, households with employed wives may prefer to spend any additional income on meals outside the home.

Households with a homemaker who had attended college spent more, but not significantly more, on prepared foods than other households. Wife's age was positively related to prepared food expenditures in both 1980 and 1972-73. Black families spent less for prepared foods than other families, although this difference declined slightly between 1972-73 and 1980.

A comparison of the estimates showed an increase in expenditures between 1972-73 and 1980 for all children's age groups. Households with children may gain time for leisure or other household activities by choosing to purchase prepared foods instead of eating meals away from home. Family size remained positively related to prepared food expenditures in 1980 but declined substantially from 1972-73.

Metropolitan families increased their expenditures for prepared foods in 1980 from 1972-73 and spent more than urban or rural families. Northeastern households spent more on prepared foods than did households in other regions, but these expenditures declined from 1972-73 to 1980.

Conclusions

The direction and magnitude of the relationship between expenditures for food consumed away from home and prepared foods and certain socioeconomic characteristics of households changed between 1972-73 and 1980. Family income, wife's employment, wife's college education, a metropolitan residence, and family size were associated with higher expenditures for food away from home in 1980. The income variable, however, showed less impact in 1980 than in 1972-73. Wife's employment had a negative effect in 1972-73. The presence of children, a rural residence,

being of the black race, and wife's age were negatively related to spending for food away from home in 1980. Except for wife's age, these variables had a greater negative impact in 1980 than in 1972-73.

Race and the interaction variable were negatively related to expenditures for prepared foods. Family income, wife's employment, wife's age, presence of children, living in the Northeast, and a metropolitan residence were associated with higher spending for prepared foods. Family size and living in the Northeast had less impact in 1980 than in 1972-73, however.

Even though proportions for food away from home to total food proportions increased from 1972-73 to 1980, family income coefficients decreased during this period. Economic conditions in 1980 may have forced many households to allocate an increased share of their income for gasoline and utilities to cover rising energy costs. Also, average family income did not rise as quickly as prices; a decline in real before-tax income may have contributed to households spending less for food away from home.

Table 2. *Expenditures for prepared food, 1980 and 1972-73*

Variable	1980		1972-73	
	Estimated coefficient	Standard error	Estimated coefficient (adjusted for price changes between 1972-73 and 1980)	Standard error
Intercept.....	2.834	2.575	4.112*	1.353
Income .....	.221*	.041	.200*	.015
Employment of wife	4.154*	1.445	.503	.790
Interaction	-.169*	.051	-.042	.024
Wife's education .....	.647	.840	.442	.635
Wife's age .....	.129*	.032	.061*	.017
Family size.....	3.353*	.501	6.054*	.324
Family composition:				
Preschool	1.820*	.815	-.378	.461
Elementary	2.080*	.734	.963*	.410
High school	3.152*	.800	1.388*	.443
Region:				
Northeast	3.367*	1.131	5.243*	.639
North Central	-1.110	1.075	2.041*	.596
South	-1.991	1.106	-.136	.599
Black race	-8.515*	1.367	-9.822*	.790
Residence:				
Metropolitan	2.594*	1.125	.956	.608
Urban.....	1.660	1.557	1.151	.791
Rural .....	.159	1.366	-1.343	.723
R ²	.203		.226	
Sample size	2,222		12,819	

*Significant at .05 level.

Further research is necessary to determine whether the types of meals consumed away from home (weekday versus weekend, daytime versus evening) yield additional information on how women allocate their time. Also, determining why meals are consumed outside the home (as a substitute for meals at home or as a leisure activity) may help explain why certain households have higher away-from-home food expenditures.

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Diets of School-Age Children and Teenagers

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The diets of children and teenagers and the factors influencing their diets have many implications in terms of dietary guidance, since certain eating behaviors established at an early age may continue throughout life. Data are presented here primarily from USDA's 1977-78 Nationwide Food Consumption Survey (NFCS), which collected information on food and nutrient intakes by individuals.^{1 2} Three-day dietary reports were collected from a nationally representative sample of approximately 35,000 individuals in the coterminous United States, including about 9,000 children and teenagers between 6 and 18 years of age and 6,000 adults between 35 and 50 years of age. Information on the diets of these two age groups is compared.

Factors Influencing Diets of Children and Teenagers

The nutritional adequacy of diets depends on food choices. Food choices are influenced by many factors, including with whom, when, and where individuals eat.

With whom they ate. For school-age children and teenagers in particular, the influence of other people--household and nonhousehold members--plays an important role in what foods are consumed. Parents often control the food choices of children and to a lesser extent those of younger

¹ For more detailed information on the 1977-78 NFCS, see "The 1977-78 Nationwide Food Consumption Survey," by Robert L. Rizek, Family Economics Review, fall 1978, pp. 3-7.

² Dietary intake information currently being collected in the USDA Continuing Survey of Food Intakes of Individuals (CSFII), Family Economics Review 1985(1): 16-17, does not include children and teenagers 6 to 18 years of age.

teenagers. Food choices of older teenagers, however, probably are more influenced by people outside the home, particularly peers (1).

Data from the 1977-78 NFCS show that the percentage of eating occasions shared with other household members declined with increasing age through the teen years, and the percentage eaten alone increased (table 1). However, regardless of age, at least 50 percent of all meals and snacks were shared with other household members. Breakfast was the meal most commonly eaten alone by children and teens; however, a larger percentage ate breakfast with other household members than ate alone. Lunch was more commonly shared with nonhousehold members, and dinner or supper was usually eaten with household members. Snacks were more commonly eaten with other household members by 6- to 11-year-olds; teens tended to eat snacks alone.

Table 1. Eating occasions shared with others and alone ¹

Sex and age (years)	Shared with--		
	Household members	Nonhousehold members	Alone
	(percent of occasions)		
Children:			
6-8.....	71	16	11
Males:			
9-11.....	66	17	15
12-14.....	59	17	22
15-18.....	50	17	30
35-50.....	50	17	31
Females:			
9-11.....	66	17	15
12-14.....	59	18	22
15-18.....	50	19	29
35-50.....	53	11	33

¹ Eating occasions for which descriptive information was not reported (2 to 3 pct) are not presented in table.

Source: USDA 1977-78 Nationwide Food Consumption Survey, Report No. I-2.

When they ate. Meal patterns affect the nutritional quality of diets. If an individual generally skips 1 meal a day, the other meals that day may not compensate for the nutrients in the meal that was missed. Crocetti and others (2), using the 1977-78 NFCS data, investigated eating behaviors and nutritional quality of diets. They showed that 64 percent of all individuals reported meal patterns of 3 meals per day for each of the 3 study days reported, and only 8 percent had patterns of 2 meals per day. Among all those who ate 2 meals per day, 46 percent skipped breakfast and 28 percent skipped the midday meal. Breakfast skipping increased with age through the teenage years regardless of sex. Children rarely reported missing breakfast; teens, particularly teenage girls, skipped breakfast more frequently than the younger group did. Almost 30 percent of teenage girls reported skipping breakfast on at least 1 of the survey days, although only 8 percent reported skipping breakfast on all 3 days.

Snacking is a common practice regardless of age. Around 75 percent of all individuals in the NFCS reported at least one snack (13). Children and teenagers obtained slightly more Calories from snacks than adults did. On the average, children 6 to 11 years of age consumed about 18 percent, teenagers about 21 percent, and adults 35 to 50 years of age about 16 percent of their total Calories from snacks. Snacks not only provide energy but also can make important nutrient contributions to diets, particularly for individuals who skip meals. The nutrient contribution of snacks depends on the food choices made. A study by Pao (8), using data from the spring portion of the 1977-78 NFCS, identified the types of foods selected by children and teenagers from day 1 of the 3-day intake survey. Foods most frequently reported as snacks by 6- to 11-year-olds in order of importance were bakery products (cookies, cakes, and pies), soft drinks, milk, milk deserts (ice cream and puddings), candy, fruit, and salty snacks. Among teenage boys (12 to 18 years) the most popular snacks were soft drinks, milk, bakery products, bread, milk desserts, salty snacks, meats, and fruits. Favorite snacks for teenage girls in decreasing order were soft drinks, bakery products, milk

desserts, salty snacks, fruit, milk, candy, and bread. Several of the popular types of snacks such as milk, bread, and fruit are good or important sources of one or more essential nutrients; however, others, such as soft drinks and candy, generally provide few nutrients in relation to Calories.

Where they ate. Although approximately 75 percent of children and teenagers obtained and ate some meals or snacks away from home, most of the food they reported eating came from household food supplies (13). About 83 percent of their total Calories were from foods from home, and 17 percent were from foods obtained and eaten away from home. These data indicate that household food supplies are a major contributor to the nutritional quality of diets of children and teens.

School was the major place for away-from-home eating for school-age children and teens; work and restaurants were the major places for adults age 35 to 50 (table 2). Older teens (15 to 18 years) obtained and ate a somewhat smaller percentage of their away-from-home meals at school and a larger percentage at fast food places than children and younger teens did. They also were more

likely to eat at work and at restaurants than younger teens. This probably is related to the greater independence of older teens. Overall, foods selected away from home were similar in nutritional quality to foods at home, providing about the same percent of total fat and other nutrients as Calories.

Diets of Children and Teens in Relation to the Dietary Guidelines

The Dietary Guidelines provide a basis for planning diets for families, including those with children and teenagers (10). The Guidelines were published jointly by the U.S. Departments of Agriculture and Health and Human Services, first in 1980 and a revised edition in September of 1985 (10, 11). They are based on current scientific knowledge about the relationship of diet to good health. The guidelines recommend: Eat a variety of foods; maintain desirable weight; avoid too much fat, saturated fat, and cholesterol; eat foods with adequate starch and fiber; avoid too much sugar; avoid too much sodium; and if you drink alcoholic beverages, do so in moderation.

Table 2. *Places where individuals obtain and eat food away from home*

Sex and age (years)	Restaurant	Fast food establishments	Work	School	Someone else's home	All other
(percent of occasions)						
Children:						
6-8.....	4	7	0	58	19	12
Males:						
9-11.....	4	7	0	59	14	16
12-14.....	4	10	1	58	13	14
15-18.....	9	16	8	40	11	16
35-50.....	30	12	33	2	8	15
Females:						
9-11.....	5	9	0	57	17	12
12-14.....	6	11	1	49	16	17
15-18.....	11	18	6	33	16	16
30-50.....	28	11	29	2	15	15

Source: USDA 1977-78 Nationwide Food Consumption Survey, Report No. 1-2.

The Dietary Guidelines are intended for healthy Americans. When applied together, they form the basis for a diet that provides adequate amounts of energy, nutrients including vitamins and minerals, and fiber, while avoiding too much sodium or too many Calories (especially those from fat, saturated fat, sugar, and alcohol). Information on the diets of children and teenagers in relation to selected Dietary Guidelines follows.

Eat a variety of foods. The purpose of this guideline is to encourage individuals to include the kinds of foods that supply the more than 40 nutrients essential for health. However, data are available on the intakes of only a selected number of nutrients. The Recommended Dietary Allowances (RDA), which are established by the National Academy of Sciences, are standards usually used to evaluate nutrient intakes (7).³

The need for energy and almost all nutrients increases during periods of growth. Except for pregnant and lactating women, the RDA for nearly all nutrients is highest during the teen years--a time of rapid growth. On the average, the diets of both children and teens were at or above recommended levels for most of the 12 vitamins and minerals that were evaluated as part of the 1977-78 NFCS. Calcium and iron were exceptions and have been identified as problem nutrients for teenagers and adult women as well as for certain other groups in the population (9). The RDA for calcium is highest for teenagers, and the RDA for iron is highest for teenagers and adult women. Table 3 shows the mean percent of the RDA of calcium and iron for children 6 to 8 years of age, teenagers, and adults 35 to 50 years of age. Average intakes for teenage girls and adult women were substantially below recommended levels for both calcium and iron. The diets of teenage boys were higher in calcium and iron, but, nevertheless, intakes averaged slightly below their RDA.

³ The RDA are established to meet the known nutrient needs of practically all healthy persons (7). Failure to meet the RDA does not necessarily mean that an individual's diet is inadequate.

Mean intakes for groups do not display the wide range in intakes by individuals.

Another way to evaluate the nutritional adequacy of dietary intakes is to look at the distribution of intakes (9) (table 4). Over 50 percent of teenage girls and adult women had diets that provided less than 70 percent of the RDA for both calcium and iron. The diets of teenage males were higher, but 24 to 35 percent of them also had diets that provided less than 70 percent of the RDA for these nutrients. The RDA for iron for children and adult men is much lower than that for teenagers, and only a small percentage had iron intakes of less than 70 percent of the RDA.

Maintain desirable weight. Obesity is associated with the development of some chronic disorders. A recent National Institutes of Health Consensus Development Conference on Health Implications of Obesity (14) recommended that children as well as adults be encouraged to keep their weight within normal range. The Conference's panel of experts expressed concern for an increasing occurrence of obesity in children and adolescents, stating that although obesity in childhood does not always result in obesity in adulthood, it is a significant

Table 3. Mean intakes of calcium and iron as percent of 1980 RDA

Sex and age (years)	Calcium (percent of RDA)	Iron
Children:		
6-8.....	114	115
Males:		
9-11.....	104	102
12-14.....	91	82
15-18.....	98	92
35-50.....	94	156
Females:		
9-11.....	96	92
12-14.....	71	65
15-18.....	63	62
35-50.....	66	60

Source: USDA 1977-78 Nationwide Food Consumption Survey, Report No. 1-2.

risk factor for adult obesity. Investigation of obesity and, subsequently, establishment of weight standards for children and teenagers is difficult due to the growth and development needs of these age groups (14). NFCS data on weight status of children and teenagers have not been evaluated.

Excessive and rapid weight loss also is related to health complications and therefore should be avoided. Two eating disorders seen primarily in adolescent girls are anorexia nervosa and bulimia (4, 5, 6). Anorexia nervosa is an excessive pursuit of thinness characterized by near-starvation dieting and compulsive exercising, resulting in emaciation and, in extreme cases, death. Bulimia is characterized by secretive binge eating followed by self-induced vomiting and/or laxative use. Frequent vomiting and purging can cause chemical imbalances that can lead to an irregular heart rate and even death.

Avoid too much fat, saturated fat, and cholesterol. Dietary fats are responsible for some of the characteristic flavors and textures of food, aid in the absorption of fat soluble vitamins, and are a source of

essential fatty acids. However, excessive levels can cause health problems. Dietary fat is a concentrated source of Calories. Excessive intakes of Calories, saturated fat, and cholesterol can increase blood cholesterol levels, and a high blood cholesterol level increases the risk of heart disease (10).

Individuals surveyed in the 1977-78 NFCS reported diets averaging about 41 percent of Calories from fat (13). Although children, and to a lesser extent teenagers, consumed fewer Calories from fat than adults did, mean intakes were above 35 percent of Calories from fat (table 5). Between one-sixth and one-fourth of children and teens reported 3-day intakes with less than 35 percent of Calories from fat (table 6). Younger children were more likely to have lower fat diets than teenagers were.

Avoid too much sugar. Most people like foods that taste sweet. In moderation, these foods can be a part of a well-balanced diet. Intakes of sugar and other caloric sweeteners are of concern because of their relationship to dental caries and because they contribute Calories but few nutrients to the diet. Diets with large amounts of sugars

Table 4. Calcium and iron--percent of 3-day intakes at specified levels of 1980 RDA

Sex and age (years)	Calcium--percent of RDA				Iron--percent of RDA			
	Below 50	50 to 69	70 to 99	100 and over	Below 50	50 to 69	70 to 99	100 and over
	(percent of individuals)				(percent of individuals)			
Children:								
6-8.....	5	9	25	61	1	5	30	64
Males:								
9-11.....	6	15	30	49	2	10	43	45
12-14.....	13	19	33	35	8	27	43	22
15-18.....	13	16	28	43	6	18	43	33
35-50.....	17	18	29	36	0	1	10	89
Females:								
9-11.....	8	17	33	42	3	18	47	32
12-14.....	24	26	34	16	23	41	30	6
15-18.....	39	23	26	12	32	38	23	7
35-50.....	36	25	23	16	33	39	24	4

Source: USDA 1977-78 Nationwide Food Consumption Survey, Report No. I-2.

have greater likelihood of being nutritionally inadequate, particularly if they are low in Calories.

Using data from the spring portion of the 1977-78 NFCS, USDA researchers estimated the intake of added sweeteners for day 1 of the 3-day food intake survey (15). Added sweeteners were defined as any sugar or other caloric sweetener that did not occur naturally in the food in which it was measured. Added sweeteners contributed an average of 14 to 16 percent of Calories for children and teenagers. This was substantially higher than the 10 to 11 percent reported for adults 35 to 50 years of age.

The major sources of added sweeteners in the diets of children and teens were soft drinks, ades, and punches. These sweet beverages accounted for about 27 percent of

the added sweeteners for children and young teenage boys. For teenage girls and older teenage boys, sweet beverages accounted for 35 to 40 percent. Other important contributors of added sweeteners were sugar and sugary foods--13 to 17 percent--and bakery products--11 to 15 percent. Soft drinks and sugary foods generally provide few nutrients. Bakery products, however, are made with grain and thus make some nutrient contribution.

Most children and teens in the 1977-78 NFCS reported consuming soft drinks, including carbonated drinks such as colas. Two-thirds of children reported soft drinks at least once in 3 days; older teens were somewhat more likely than children or younger teens to report consumption of these beverages and to obtain them from away-from-home sources (table 7). For all age groups,

Table 5. Mean percent of Calories from fat

Age (years)	Sex		
	Both (percent of Calories from fat)	Males	Females
6-8.....	38	--	--
9-11.....	--	39	39
12-14.....	--	40	39
15-18.....	--	41	40
35-50.....	--	43	42

Source: USDA 1977-78 Nationwide Food Consumption Survey, Report No. I-2.

Table 6. Percent of 3-day intakes at less than 35 percent of Calories from fat

Age (years)	Sex		
	Both (percent of individuals)	Males	Females
6-8.....	24	--	--
9-11.....	--	21	24
12-14.....	--	18	22
15-18.....	--	17	21
35-50.....	--	13	17

Source: USDA 1977-78 Nationwide Food Consumption Survey, Report No. I-2.

Table 7. Individuals reporting soft drinks at least once in 3 consecutive days¹

Sex and age (years)	Individuals using soft drinks		
	At home (percent of individuals)	Away from place	Either place
Children:			
6-8.....	56	22	65
Males:			
9-11.....	56	24	66
12-14.....	54	29	67
15-18.....	56	40	74
35-50.....	38	28	53
Females:			
9-11.....	55	23	64
12-14.....	59	29	70
15-18.....	61	43	78
35-50.....	47	24	57

¹ Soft drinks include carbonated drinks (such as colas, fruit-flavored and cream sodas, ginger ale, root beer, and carbonated diet drinks) and noncarbonated soft drinks made from powdered mixes and liquid concentrates.

All individuals using drinks at home and/or away from home.

Source: USDA 1977-78 Nationwide Food Consumption Survey, Report No. I-1.

however, most intake was from home sources--approximately 80, 70, and 60 percent, respectively, for children, younger teens, and older teens.

A recent study of beverage use by teenagers and its effect on nutrient intake showed that soft drink consumption had a substantial effect on calcium intake, particularly for teenage girls (3). The author suggested that soft drinks may be replacing milk as a beverage in the diets of some teens and thus lowering the intake of calcium.

Implications

Dietary patterns established at a young age may last a lifetime. Parents can control what their young children eat, but as children grow older their eating behaviors become more independent. If parents follow healthy dietary practices, their children may follow such eating patterns as they take additional responsibility for their own diets.

The Dietary Guidelines are a good basis for planning healthful diets for Americans. No doubt, children and teens can benefit from appropriate dietary guidance. However, because most of the food eaten by children and teenagers comes from household food supplies, the individual who plans, purchases, and prepares food for household members has the most opportunity to influence the food available and many of the food choices ultimately made by the child or teenager. If the food choices available at home are those that contribute nutrients and are moderate in fat, sugar, and sodium, it is more likely that children and teens will have high quality diets.

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Revision of the Equal Credit Regulation

The Federal Reserve Board has responsibilities for writing or enforcing a number of major laws that offer consumers protection in their financial dealings. For example, the Equal Credit Opportunity Act (ECOA), part of the Consumer Credit Protection Act (CCPA), is one of several laws concerning financial services implemented by the Board. The ECOA prohibits creditors from taking into account a credit applicant's race, color, religion, national origin, sex, age (with some qualification), or marital status in making a credit decision. Creditors cannot discriminate against an applicant because he or she receives income from public assistance, nor against anyone who in good faith has exercised rights under the CCPA. ECOA applies to business and commercial transactions as well as to consumer

credit, and it affects all stages of a credit transaction, including the application, credit investigations, creditworthiness standards, credit terms, signature rules, credit reporting, and collection procedures. ECOA went into effect in 1975 and was expanded in 1976.

In 1977 the Federal Reserve Board issued a set of rules, collectively called Regulation B, to carry out the ECOA. These rules were recently reviewed under the Board's regulatory improvement program to determine which of its regulations can be eliminated, replaced with a nonregulatory program, simplified to ease the burden of compliance, or made easier to understand. Under consideration during the review process were ways to reduce burdens on industry while retaining the protections that Congress intended for credit applicants. The Board also studied whether the rules could be reworded to carry out congressional intent more effectively. The review included comments received from the public, a study of relevant court decisions, an analysis of each section of the regulation, and an assessment of the costs and benefits of some of the rules. The review yielded a proposal for specific changes, which was published by the Board in March 1985 for public comment. An amended regulation was then issued in November 1985, which took effect in December 1985, with a transition period ending September 1986.

There were only minor changes made to Regulation B after the review process was completed for several reasons. First, no statutory amendments mandated changes in Regulation B. Second, a review of court decisions under ECOA did not reveal a great need for clarification of ambiguities or modification of technical provisions. Third, the Board was responsive to consumer groups, which urged the Board to avoid changes that would reduce civil rights protections. And fourth, many creditors found most of the existing requirements to be manageable. The new regulation is shorter because obsolete material was deleted and footnotes and other

explanatory matter were placed in an official staff commentary that complements the revised regulation.

The following is a summary of the changes made in Regulation B:

- Creditors are required to note an applicant's race or national origin and sex on loan applications for the purchase or refinancing of residences, including mobile homes. (Real estate was selected for special monitoring because unlawful discrimination in this area can be especially detrimental to members of minority groups.)

- The definition of applicant was amended to include guarantors, which gives guarantors legal standing to sue for violations of their rights under Regulation B.

- New rules were adopted that enable creditors to streamline the procedure for informing applicants when additional information is needed for a credit decision, and sample forms for notifying applicants of credit denials were revised.

- The criteria that a credit-scoring system must meet to qualify as "demonstrably and statistically sound" were redefined, and systems that meet the criteria may use an applicant's age as a factor.

- The reporting rules applicable to joint accounts held by spouses were updated, as were the reporting rules for individual accounts on which a spouse is an authorized user.

- Creditors are required to retain applications withdrawn by the applicant in advance of a decision for the purpose of improving the data available to the regulatory agencies.

The Federal Reserve Board continues to monitor developments to ensure that the ECOA is achieving its intended goals.

Source: Smith, Dolores S., 1985, Revision of the Board's equal credit regulation: An overview, Federal Reserve Bulletin 71(12): 913-923.

Characteristics of the Rural and Farm-Related Population

Families solely dependent on farm income are more likely to be in poverty than farm families with additional sources of income. Data from the 1980 Census of Population show that one-third of the farm families with farm self-employment income as their only source of income were below the poverty level in 1979, but less than one-tenth of the families were in poverty if they had income from other sources. The median income of a white family with a farm operator or manager was \$16,456, compared with a median income of \$13,981 for a Spanish origin¹ farm-operator family. Nearly one-half (43 percent) of the Spanish origin families were in poverty if they were solely dependent on farm self-employment income.

These and related facts are available from the Bureau of Census' publication Characteristics of the Rural and Farm-Related Population. Social, economic, and housing characteristics are presented in seven detailed tables for three populations--those living on farms, those receiving farm self-employment income, and persons employed in agriculture. The report is part of the Subject Reports series and presents sample data from the 1980 Census of Population on the population associated with agriculture. A summary text is not provided, but appendices provide sufficient information to interpret the data tables. The report is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

¹ Persons of Spanish origin may be of any race.

Source: U.S. Department of Commerce, Bureau of the Census, 1985, Characteristics of the Rural and Farm-Related Population, 1980 Census of Population, vol. 2, Subject Reports, PC80-2-9C.

1986 Revision of Poverty Income Guidelines

The poverty income guidelines issued by the U.S. Department of Health and Human Services are used as an eligibility criterion by various Federal programs. The guidelines are revised annually to reflect changes in the Consumer Price Index.¹

The poverty income guidelines are a simplified version of the poverty thresholds used by the Bureau of the Census, U.S. Department of Commerce, for statistical purposes, such as determining the number of persons in poverty and their demographic characteristics. The guidelines are used for administrative purposes, for example, determining whether a person or family is financially eligible for assistance or services under a particular Federal program.

¹ For information on the methodology used to calculate the guidelines, see "Poverty thresholds and poverty guidelines," Family Economics Review 1985(1):17-18.

The following definitions, derived from the Bureau of the Census, are used in connection with the poverty income guidelines:

1. **Family**--a group of two or more persons related by birth, marriage, or adoption, who reside together. If a household includes more than one family and/or more than one unrelated individual, the poverty guidelines are applied separately to each family and/or unrelated individual.

2. **Family unit of size one**--a person 15 years or over who is not living with any relatives.

3. **Income**--total annual cash receipts from all sources before taxes.

The poverty guidelines given in the table below are applicable to both farm and nonfarm families.

Source: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, 1986, Poverty income guidelines: Annual revision, Federal Register 51(28):5105-5106.

Poverty income guidelines, 1986¹

Size of family unit	48 contiguous States and the District of Columbia	Alaska	Hawaii
1	\$5,360	\$6,700	\$6,170
2	7,240	9,050	8,330
3	9,120	11,400	10,490
4	11,000	13,750	12,650
5	12,880	16,100	14,810
6	14,760	18,450	16,970
7	16,640	20,800	19,130
8	18,520	23,150	21,290

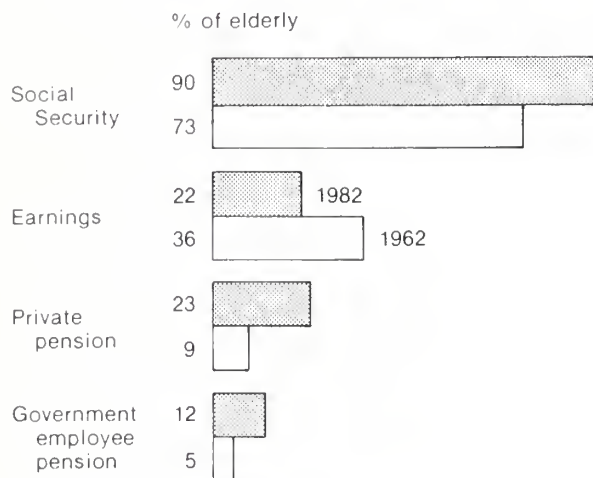
¹ For family units with more than 8 members--for each additional member add \$1,880 in the contiguous States and the District of Columbia, add \$2,350 in Alaska, and add \$2,160 in Hawaii.

Source: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, 1986, Poverty income guidelines: Annual revision, Federal Register 51(28):5105-5106.

Some New USDA Charts

Chart 138

Selected Income Sources of the Elderly



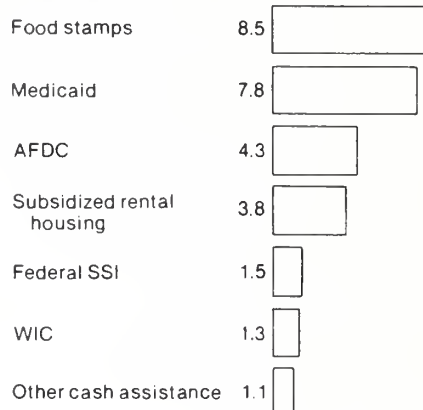
Source: Bureau of the Census

Chart 141

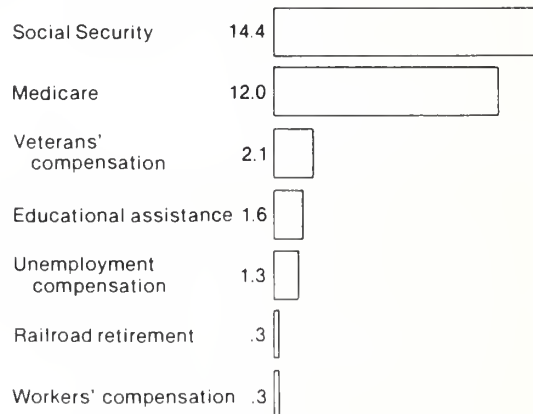
Persons Receiving Benefits from Selected Government Programs

Percent

Means-tested programs:



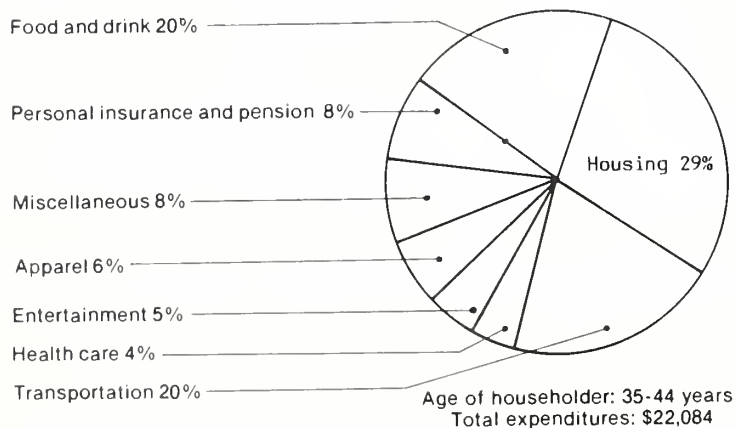
Nonmeans-tested programs:



First quarter 1984 data. AFDC: Aid for Families with Dependent Children. WIC: Women, Infants, and Children. SSI: Supplemental Security Income. Nonfarm, noninstitutional population. Source: Survey of Income and Program Participation, Bureau of the Census.

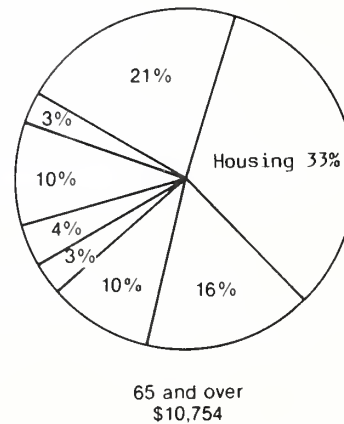
Chart 140

Annual Household Expenditures by Age of Householder



Average total expenditures.

Source: 1980-81 Consumer Expenditure Survey, Bureau of Labor Statistics



Households Receiving Noncash Benefits

Noncash benefits can be defined as benefits received in a form other than money that serve to enhance or improve the economic well-being of the recipient. Noncash benefits can be categorized as public transfers and those that are employer or union provided. Public transfers include the Food Stamp Program; the National School Lunch Program; public and other subsidized rental housing; medicare and medicaid; and CHAMPUS,¹ VA, or military health insurance. Employer- or union-provided benefits include pension plans and group health insurance plans.

In 1984, 76.7 million, or 88 percent, of U.S. households received at least one non-cash benefit, an increase of 972,000 households from 1983. In order to receive means-tested benefits, such as food stamps or medicaid, a household's income or assets must fall below a specified level. The number of households receiving at least one means-tested noncash benefit was 14.6 million in 1984, not significantly different from the 1983 figure. In 1984, 8 percent of all households were receiving food stamps, 21 percent of households with school children were receiving free or reduced-price school lunches, 12 percent of renting households were residing in publicly owned or other subsidized housing, and 10 percent of households included members covered by medicaid.

Nonmeans-tested benefits include medicare, regular-priced school lunches, and employer- or union-provided benefits. The number of households receiving nonmeans-tested benefits increased from 69.8 million in 1983 to 70.7 million in 1984. There were 21.3 million households with one or more members covered by medicare in 1984 and 11.1 million households with school children receiving regular-priced school lunches. The number of households with one or more workers covered by an employer- or union-provided pension plan showed no significant change between 1983 and 1984. However, households

with members covered by group health insurance plans that were paid for, at least in part, by their employer or union increased by 617,000 to 49.6 million.

Source: U.S. Department of Commerce, Bureau of the Census, 1985, Characteristics of Households and Persons Receiving Selected Noncash Benefits: 1984, Current Population Reports, Consumer Income, Series P-60, No. 150.

New Publications from Human Nutrition Information Service

The following new publications from USDA's Human Nutrition Information Service are for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, 202-783-3238:

- Dietary Levels: Households in the North Central Region, Spring 1977, Nationwide Food Consumption Survey 1977-78. May 1985. Stock No. 001-000-04446-0. \$7.
- Dietary Levels: Households in the Northeast, Spring 1977, Nationwide Food Consumption Survey 1977-78. May 1985. Stock No. 001-000-04445-1. \$7.
- Dietary Levels: Households in the South, Spring 1977, Nationwide Food Consumption Survey 1977-78. May 1985. Stock No. 001-000-04447-8. \$7.
- Dietary Levels: Households in the West, Spring 1977, Nationwide Food Consumption Survey 1977-78. May 1985. Stock No. 001-000-04448-6. \$7.
- Nutritive Value of Foods. Dec. 1985. Stock No. 001-000-04457-5. \$2.75.
- Thrifty Meals for Two: Making Food Dollars Count. Feb. 1986. Stock No. 001-000-04459-1. \$2.50.

¹ Civilian Health and Medical Program of the Uniformed Services.

Perspectives on Comparable Worth

The concept of comparable worth emerges from interpretations of statistical estimates. These estimates have generally shown a continuing disparity between the wages of men and women. Recent data, however, indicate that the earnings gap has been gradually decreasing over the past several years. Reports from the Bureau of Labor Statistics' (BLS) Current Population Survey (CPS) show that for the first quarter of 1985 women working full time had median wage and salary earnings of about \$268 per week. This is 66 percent of the \$404 earned by their male counterparts. This earnings ratio has fluctuated between 61 and 67 percent from quarter to quarter over the last 6 years, but the trend has been mostly upward.

Preliminary data for 1984 from an earlier CPS series on year-round, full-time earnings show women's median wages at \$14,810 and those for men at \$23,225, a 64-percent ratio. The same ratio was 60 percent in 1980, 59 percent in 1970, and 61 percent in 1960. Like the quarterly earnings data, this series also indicates that the overall male-female earnings gap has narrowed.

CPS microdata look beneath aggregate levels to show how male and female earnings differ by occupation, hours of work, education, race, family status, and other characteristics. Often statistics adjusted by these factors show a male-female earnings gap that is reduced considerably. A BLS study (Monthly Labor Review 107(6):29-33) demonstrated that although the average pay for men in a selected group of white-collar occupations generally exceeded the pay earned by women in those same occupations, differences nearly disappeared when each occupation was broken down according to skill and experience. Because a much smaller proportion of women held senior level jobs, their average pay figure was depressed. This concentration of women in entry level positions may be due in part to the increased number entering the labor force in the seventies and early eighties. As women move up in their professions, pay differences with men may decline. Some observers

believe, however, that supply and demand factors will keep women from advancing. Others feel that the high labor force participation rates of women are only a temporary phenomenon despite evidence to the contrary.

Source: Norwood, Janet L., 1985, Perspectives on comparable worth: An introduction to the data, Monthly Labor Review 108(12): 3-4.

CONSUMER PRICE INDEX--REVISION

Beginning with this issue, the following groups will be included in our regular feature of the Consumer Price Index for all urban consumers:

- Renters' costs
- Homeowners' costs
- Maintenance and repairs
- Maintenance and repair services
- Maintenance and repair commodities
- Housefurnishings
- Housekeeping supplies
- Housekeeping services
- Apparel commodities
- Infants' and toddlers' apparel
- Apparel services
- New vehicles
- Used cars
- Motor fuel
- Maintenance and repair
- Medical care commodities
- Medical care services
- Professional services
- Personal and educational expenses

Consumer Prices

Consumer Price Index for all urban consumers
[1967 = 100, unless otherwise noted]

Group	Unadjusted indexes			
	Apr. 1986	Mar. 1986	Feb. 1986	Apr. 1985
All items	325.3	326.0	327.5	320.1
Food	316.1	315.4	315.3	309.6
Food at home.....	301.5	301.2	301.5	297.7
Food away from home.....	357.0	355.5	354.2	343.9
Housing	358.0	357.0	356.5	345.9
Shelter.....	400.1	397.0	394.8	375.9
Renters' costs ¹	120.9	119.6	119.0	113.5
Rent, residential	277.9	275.0	273.7	260.4
Homeowners' costs ¹	118.7	117.9	117.0	111.3
Maintenance and repairs	367.6	367.5	379.6	368.0
Maintenance and repair services	424.6	422.4	432.8	418.2
Maintenance and repair commodities ..	264.5	266.1	277.8	270.4
Fuel and other utilities	381.8	385.5	390.0	388.7
Fuel oil, coal, and bottled gas	518.3	549.9	591.2	623.5
Gas (piped) and electricity	439.2	442.3	444.5	445.9
Household furnishings and operation.....	249.6	249.8	249.0	247.9
Housefurnishings	200.4	201.0	199.7	201.7
Housekeeping supplies.....	318.5	317.9	318.6	312.6
Housekeeping services.....	345.4	345.1	344.5	337.9
Apparel and upkeep	207.3	206.3	204.1	205.9
Apparel commodities	191.7	190.8	188.5	191.8
Men's and boys' apparel	199.7	198.3	196.8	197.4
Women's and girls' apparel	168.0	167.6	163.4	170.0
Infants' and toddlers' apparel	316.6	313.1	311.6	295.3
Footwear	211.4	210.1	207.9	213.2
Apparel services	332.9	331.5	330.7	318.4
Transportation	303.3	309.6	319.2	320.0
Private transportation	295.3	302.1	312.2	314.6
New vehicles	221.0	220.1	220.2	213.9
Used cars	364.8	367.2	370.7	386.4
Motor fuel.....	279.5	308.5	351.5	374.2
Maintenance and repair.....	360.6	359.3	358.9	348.2
Public transportation	422.2	421.2	422.2	398.0
Medical care.....	428.0	425.8	422.3	398.0
Medical care commodities.....	271.3	269.4	267.4	253.9
Medical care services	462.3	460.1	456.2	429.4
Professional services	386.9	385.0	381.6	363.0
Entertainment	272.3	271.9	272.0	263.3
Other goods and services.....	341.8	341.1	340.3	321.8
Personal care.....	290.5	290.3	289.1	279.8
Personal and educational expenses	418.9	417.9	417.7	388.3

¹Indexes based on December 1982 = 100 base.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Cost of food at home estimated for food plans at 4 cost levels, April 1986, U.S. average¹

¹Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for the thrifty food plan were computed from quantities of foods published in Family Economics Review, 1984 No. 1. Estimates for the other plans were computed from quantities of foods published in Family Economics Review, 1983 No. 2. The costs of the food plans are estimated by updating prices paid by households surveyed in 1977-78 in USDA's Nationwide Food Consumption Survey. USDA updates these survey prices using information from the Bureau of Labor Statistics (CPI Detailed Report, table 3) to estimate the costs for the food plans.

³The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person--add 20 percent; 2-person--add 10 percent; 3-person--add 5 percent; 5- or 6-person--subtract 5 percent; 7- or more-person--subtract 10 percent.

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Highlights

Housing Alternatives for the Elderly

**Expenditures for Food —
Away From Home and Prepared**

Diets of Children